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Memorandum

FORESTRY SCIENCES LABORATORY
PACIFIC NORTHWEST FOREST AND
RANGE EXPERIMENT STATION
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4500

TO : B. E. Wickman, Project Leader DATE: June 18, 1968

FROM : R. R. Mason, Research Entomologist

SUBJECT: Tussock moth population at Aztec Peak, Arizona

On the week of June 3-7, Gene Paul and I re-examined the tussock moth population at Aztec Peak, Arizona. We were assisted one day by Harold Flake of Region 3, Albuquerque.

The great majority of larvae sampled were in the first instar. However, at least one third instar larva was collected. By the range of larval ages, it seems probable that hatching there extends over a period of at least a month. Some larvae were collected at each sample point and brought back to Corvallis for rearing.

The sampling technique used was again very successful. Sampling first instar larvae, as expected, proved to be a far more reliable way to estimate the population than sampling eggs. Larvae were found at each of the ten sample points and on a large proportion (65%) of the twig samples at most points. At nine of the points, the population has increased significantly from a comparable time last year. These results are shown below:

Sample Point	1st Instar Larvae June 5-8, 1967	1st Instar Larvae June 4-6, 1968
	Larvae per M sq. in. of branch area	
A	1.82	10.38
B	1.80	9.11
C	7.29	27.00
D	3.29	28.00
E	0.78	8.42
F	2.18	10.12
G	2.04	11.05
H	0.67	4.62
I	0.07	1.53
J	0.89	0.17
Mean	2.08	11.04

The average ratio of increase over last year is about 5. There is some indication that larvae in the heavier spots may be dispersing into the lighter zones so that population levels over the whole infestation may tend to be less variable in the future. The area north and west of the

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Murphy Ranch (Points C & D) continues to have the highest population. It can be expected that noticeable defoliation will occur in that section this year.

Our plans are to resample the infestation again during the last instar, probably the week of July 29.

cc: Frank Yasinsky, R-3
Harold Flake, R-3
C. G. Thompson
B. Maksymiuk
K. H. Wright
H. G. Paul

R. R. Mason ct.